Supplemental material

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Supplemental Figure 1. Patient flow diagram.

Supplemental Figure 2. Waterfall plot showing the best percentage change from baseline in serum PSA level for all enrolled subjects.
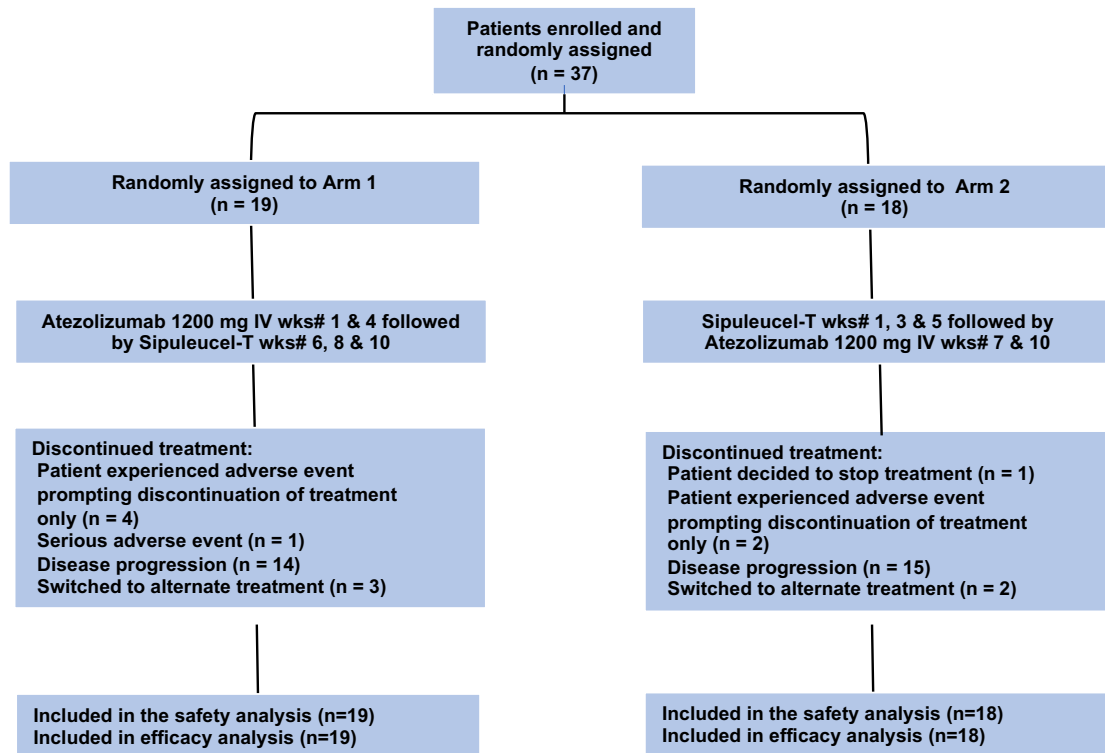
Supplemental Figure 3. A. Representative example of prostate carcinoma with a CPS score of 0 (no PD-L1 expression) from the current study. B. representative example of prostate carcinoma with an elevated CPS score from the current study. PD-L1 expression in the tumors was evaluated using the Combined Positive Score (CPS), which is the number of PD-L1 staining cells (tumor cells, lymphocytes, macrophages) divided by the total number of viable tumor cells and multiplied by 100. C. The summaries of the Combined Positive Scores for the various patient tumors are listed in the plots.

Supplemental Figure 4. Changes in TCR profiles following treatment.
The TCRβ CDR3 sequences from PBMC cells collected at baseline and at 11/12 weeks were reported. **「○ "Responder" and 「× "Non-responder".**

Supplemental Figure 5. Changes in serum cytokine profiles following treatment.
A panel of cytokines were queried in serum samples collected at baseline and weeks 12/11 using the 22-plex customized human cytokine Luminex assay (R&D Systems).
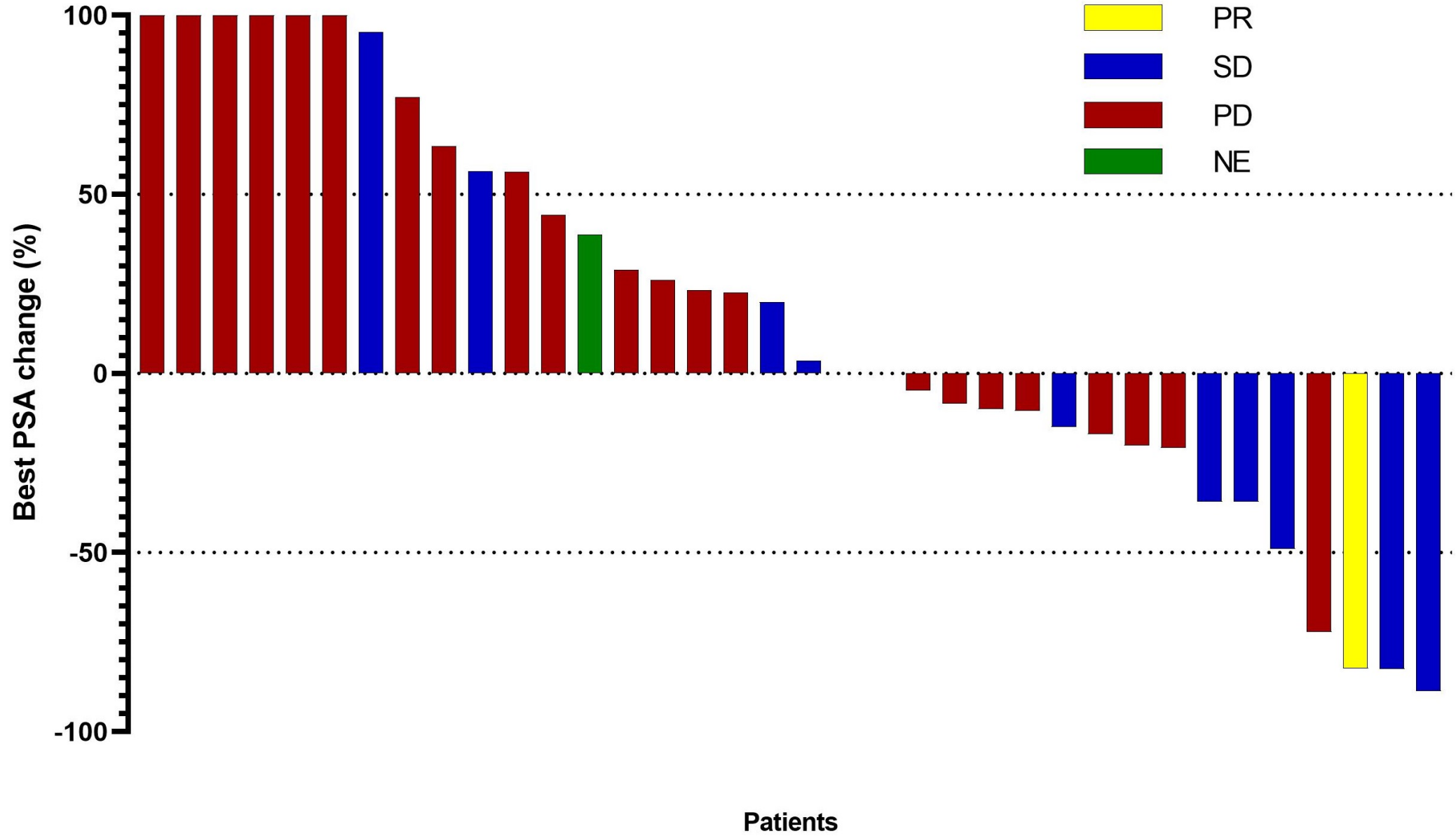
Supplemental Figure 6. Overall immune response signal comparison. Overall immune responses were indicated by sum-of-PIWAS values across all antigens with PIWAS values of 6 or greater. P-values were calculated by one-sided Wilcoxon's rank sum test.
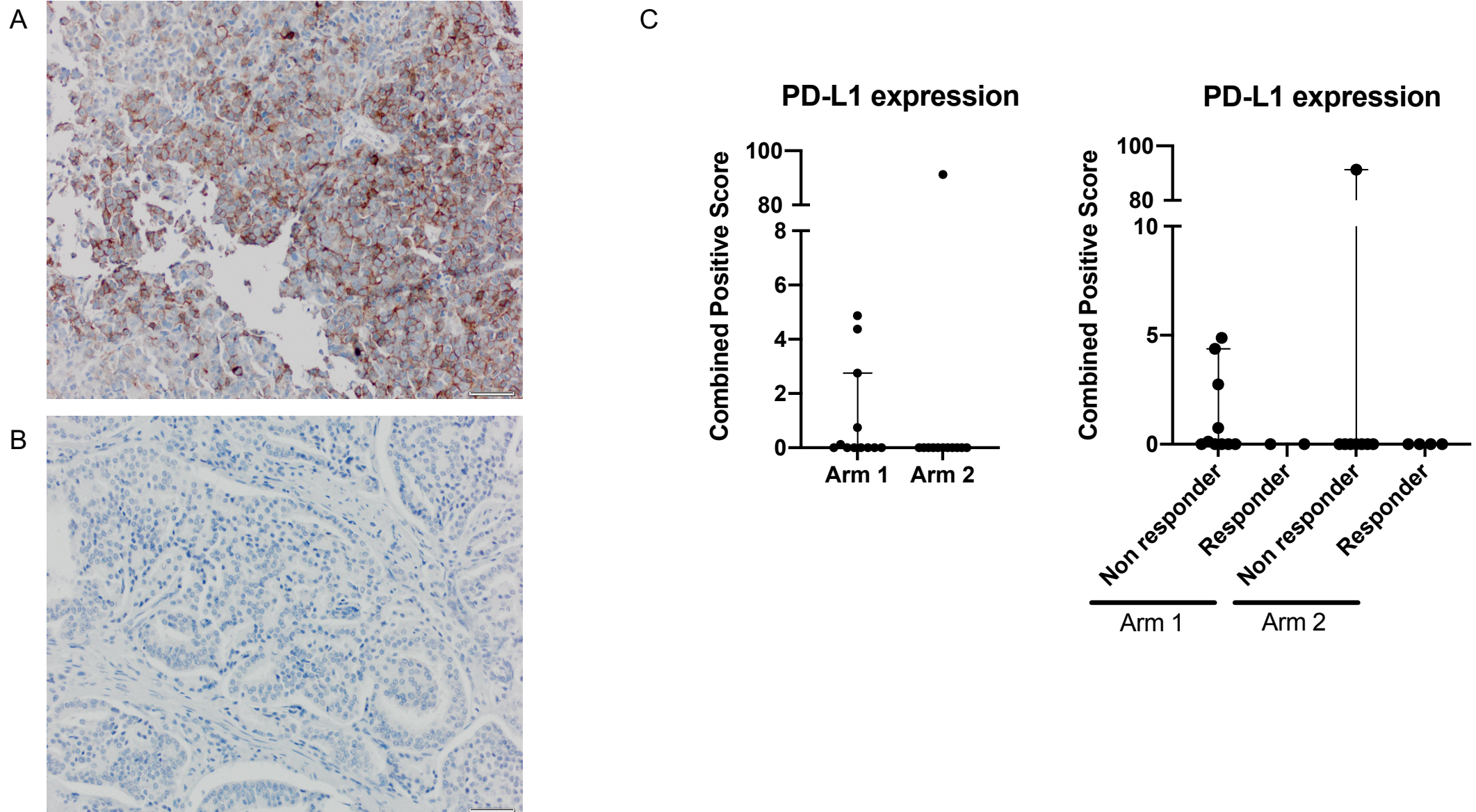
Supplemental Figure 1

Patients enrolled and randomly assigned (n = 37)

Randomly assigned to Arm 1 (n = 19)

Randomly assigned to Arm 2 (n = 18)

Atezolizumab 1200 mg IV wks# 1 & 4 followed by Sipuleucel-T wks# 6, 8 & 10

Sipuleucel-T wks# 1, 3 & 5 followed by Atezolizumab 1200 mg IV wks# 7 & 10

Discontinued treatment:
Patient experienced adverse event prompting discontinuation of treatment only (n = 4)
Serious adverse event (n = 1)
Disease progression (n = 14)
Switched to alternate treatment (n = 3)

Discontinued treatment:
Patient decided to stop treatment (n = 1)
Patient experienced adverse event prompting discontinuation of treatment only (n = 2)
Disease progression (n = 15)
Switched to alternate treatment (n = 2)

Included in the safety analysis (n=19)
Included in efficacy analysis (n=19)

Included in the safety analysis (n=18)
Included in efficacy analysis (n=18)

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Supplemental Figure 2

Waterfall plot of PSA changes

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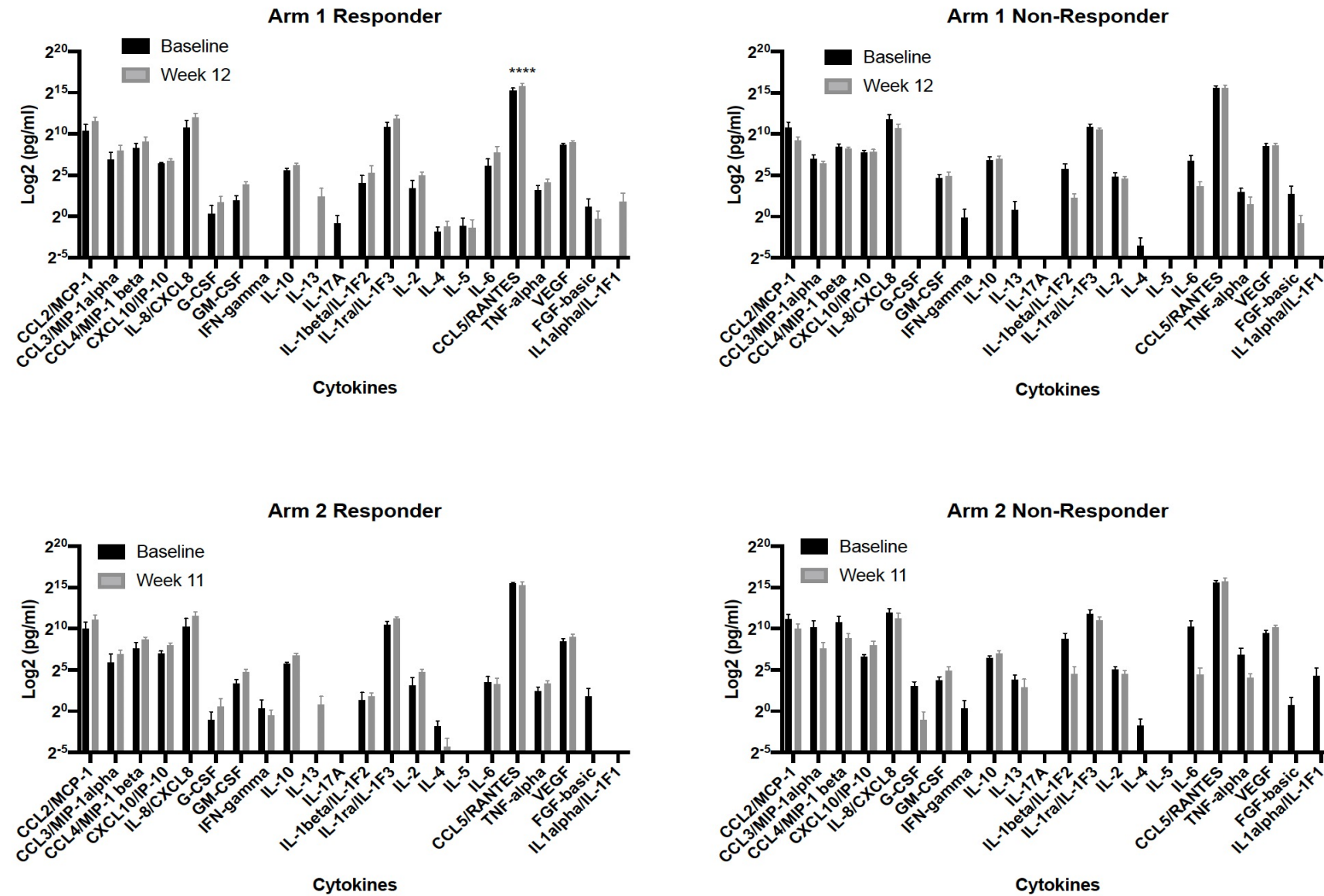
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Supplemental Figure 3

Supplemental Figure 4
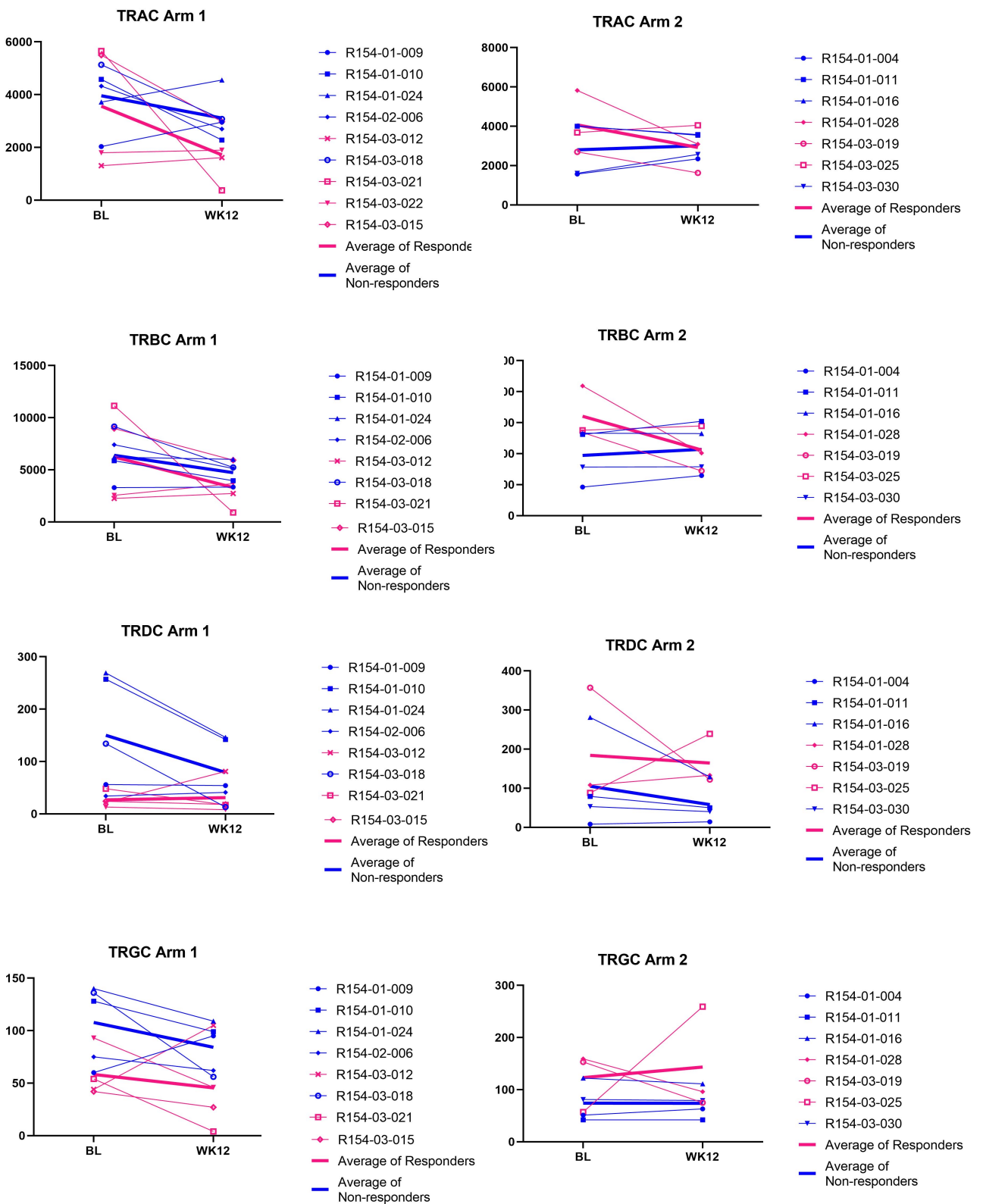
Supplemental Figure 5

Supplemental Figure 6

A Sum of PIWAS Values at Baseline

B Sum of PIWAS Values at BL, 6M Res. vs. Non-Res.

C Sum of PIWAS Values at WK12

D Sum of PIWAS Values at WK12, 6M Res. vs. Non-Res.